



ENGLEWOOD
HEALTH

**VASCULAR SURGERY FELLOWSHIP
CURRICULUM
GOALS AND OBJECTIVES**

Updated 8/10/21



ENGLEWOOD HEALTH

Vascular surgery Fellowship Curriculum Goals and Objectives

Educational Goals and philosophy	Page 3
Program Overview	Page 3
Curriculum Overview.....	Page 4
Goals and Objectives for Competencies	Page 4-6
First Year of Training – PGY VI	Page 7
General Information	Page 8
Research	Page 8
RPVI.....	Page 9
Didactic Experiences	Page 9
Clinical Rotations	Page 9
Evaluations	Page 10
Supervision	Page 11
Research	Page 11
Non Invasive Vascular Laboratory Conference	Page 11
Basic Science Lectures.....	Page 12
Educational Journal Club/Guest Speakers/ New Technology Presentations.....	Page 13-14
Clinical Rotation	Page 14
Endovascular Training	Page 14
Non-invasive Laboratory	Page 14
Diagnostic Angiography	Page 15
Open Cases	Page 15
Outpatient Clinic	Page 15
Second Year of Training	Page 16-17
General Information	Page 17
Didactic Experiences	Page 17
Endovascular Procedures	Page 17
Inpatient Management	Page 18
Outpatient Management	Page 18
Evaluations	Page 18
Supervision	Page 18
Research	Page 18
RPVI.....	Page 18
Clinical Rotation	Page 19
External Conferences.....	Page 20
Wound Care- Curriculum/Goals and Objectives.....	Page 21



ENGLEWOOD HEALTH

EDUCATIONAL GOALS AND PHILOSOPHY

The goal of the Vascular Fellowship Program at Englewood Hospital is to provide training to general surgeons who, upon completion of the program, will be qualified vascular surgery specialists. This is accomplished by providing both the experiences and environment where fellows can develop the surgical skills, medical knowledge, communication, clinical skills, and professional attitudes to become physicians committed to lifelong learning, medical system integration, and excellence in the diagnosis of vascular diseases, performance of open vascular surgery, and endovascular interventions.

Whether fellows pursue an academic career or one in community practice, the goal of the Vascular Fellowship Program is to equip fellows with the ability to critically assess the medical literature, develop an understanding of research, and keep abreast of new developments. Since the acquisition of knowledge in medicine must be lifelong, general principles are emphasized throughout the duration of training.

PROGRAM OVERVIEW

Goals: The general goals of the program are to provide a learning and training environment which facilitates the development of expert vascular surgery specialists who will have the tools and abilities to be leaders in both the clinical and academic community of vascular surgeons. These goals are accomplished by providing:

- Didactic instruction and research experience in vascular physiology and pathobiology.
- Instruction and direct clinical experience with the technology, clinical applications, and professional interpretation of noninvasive vascular testing.
- Instruction and direct clinical experience in the performance and interpretation of the complete spectrum of endovascular interventions.
- Supervised performance of open vascular surgical procedures.

Following successful completion of the training program the trainee should be eligible for certification as an RVPI (Registered Physician in Vascular Interpretation) and eligible for certification in Vascular Surgery by the American Board of Surgery. It is expected that the trainee will be a competitive candidate for the professional position of his or her choice, whether private practice, academic, or a combination of the two. Additionally, it is a goal of the program to



ENGLEWOOD HEALTH

graduate physicians competent in all aspects of vascular care, including diagnosis, medical management, endovascular and open management.

CURRICULUM OVERVIEW

The fellowship training program in Vascular Surgery at Englewood Hospital and Medical Center is a two-year program comprised of all the clinical and academic components of:

- Endovascular diagnostics and therapeutics
- Noninvasive vascular testing with ultrasound-based therapeutics
- Clinical research
- Open surgical procedures

These activities are all conducted at Englewood Hospital and Medical Center.

GOALS AND OBJECTIVES FOR COMPETENCIES

At the completion of the training program it is expected that the fellow will be fully prepared to embark on a career as a vascular surgeon through education and successful completion in the following areas:

Medical Knowledge: Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social behavioral sciences, as well as the application of this knowledge to patient care:

- Demonstrate appropriate general knowledge in vascular diseases.
- Know and apply the basic and clinically supportive sciences which are appropriate to the discipline of vascular surgery.
- Demonstrate competence in all surgical and technical procedures commonly performed in vascular surgery.

Patient Care: Fellows must be able to provide both inpatient and outpatient care that is compassionate, appropriate and effective for the treatment of vascular diseases and the promotion of health. Fellows are expected to:

- Establish skills in gathering accurate and essential patient data.



ENGLEWOOD HEALTH

- Demonstrate an understanding of informed treatment plans, including up to date scientific evidence and clinical judgment.
- Demonstrate competence in pre and post-operative care, the ability to select the procedure most appropriate to the clinical situation, and to recognize his/her limitations.
- Demonstrate competence in all surgical and technical procedures commonly performed in vascular surgery.
- Demonstrate caring and respectful behaviors when interacting with patients and families.

Interpersonal and Communication Skills: Fellows must demonstrate interpersonal and communication skill that result in effective exchange of information and collaboration with patients, their families, and health professionals. Fellows are expected to:

- Communicate openly and effectively with patients, peers, healthcare professionals and ancillary staff.
- Utilize effective listening and questioning skills while providing and receiving patient information.
- Demonstrate effective exchange of information.
- Present clear and concise thoughts at conference and presentations.

Professionalism: Fellows must demonstrate commitment to carrying out professional responsibilities, and an adherence to ethical principles. Fellows are expected to:

- Demonstrate an ability to effectively utilize systematic methodology to assess practice experience and perform practice based improvement activities.
- Locate, appraise, and assimilate evidence from scientific studies related to patient's vascular problems.
- Demonstrate an ability to obtain and utilize information from patient population and the larger population from which they are drawn to enhance patient care.
- Utilize information technology to manage information, access on-line medical information, and to support their own education.
- Demonstrate an ability to utilize knowledge of study designs and statistical methods to recognize strengths and weaknesses in clinical studies and other information on diagnostic and therapeutic effectiveness.
- Facilitate the education of medical students, residents, and other healthcare professionals.

Systems Based Practice: Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Fellows are expected to:



ENGLEWOOD HEALTH

- Demonstrate understanding of vascular issues; how they affect other health care providers, the health care organization, and society as a whole. Collaborate with healthcare professionals from other disciplines to provide optimal care.
- Exhibit an understanding of how environmental factors impact healthcare organizations and healthcare costs.
- Demonstrate ability to recognize how types of medical practices and delivery systems differ from one another, including methods of controlling health care costs and allocating resources. Utilize this knowledge to insure quality healthcare.
- Develop an appreciation for practicing cost effective healthcare and resource allocation that does not compromise patient care.
- Express knowledge of hospital and community resources in place to support patients, advocate for quality patient care and consistently assist patients in dealing with complexities of the healthcare system.

Technical Skills: Fellows are expected to demonstrate competence in all surgical and technical procedures commonly associated with vascular surgery. In particular, competence must be acquired in:

- detailed vascular anatomy and physiology.
- proper history taking and physical examination of patients with vascular problems in both the hospital and outpatient clinic setting.
- early recognition and treatment of complications of vascular surgery.
- open major vascular procedures.
- endovascular procedures.



ENGLEWOOD HEALTH

FIRST YEAR OF TRAINING – PGY—VI

YEAR 1	PRIMARY ACTIVITY	SECONDARY ACTIVITY
July	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Radiation Safety Course Vascular Laboratory Interpretation
August	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular Laboratory Interpretation / Computerized Tutorials
September	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular Laboratory Interpretation
October	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation
November	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation
December	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation
January	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation
February	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation
March	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation
April	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation



ENGLEWOOD HEALTH

May	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation
June	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation

GENERAL INFORMATION

Research

Fellows will be expected to become actively involved in research in vascular surgery, with the goal of completing at least one project suitable for presentation and publication. This may be a new project, which reflects a particular interest of the fellow, although generally the fellow engages in a project that reflects ongoing interests of the vascular faculty.

In addition to research activities, the fellow will become familiar with non-invasive vascular diagnosis. This will take the form both of directed reading in the basic science and physical principles on non-invasive testing, as well as a hands-on experience. This experience is distributed among all the major types of vascular diagnosis, including cerebrovascular, aortic, mesenteric, hemodialysis, peripheral arterial and venous duplex examinations. While not required, it is recommended that the fellow be prepared to take the vascular lab interpretation examination at the end of the fellowship.

RPVI - Registered Physician in Vascular Interpretation

The Registered Physician in Vascular Interpretation (RPVI) certification, developed in response to requests from physicians in the vascular surgery and vascular medicine community, documents the highest attainable standard in vascular ultrasound interpretation.

The RPVI certification programs is accredited by ANSI to the International Organization for Standardization (ISO) 17024 Standard. Earning the RPVI certification is a requirement to sit for the American Board of Surgery's Vascular Surgery Qualifying Examination. Additionally, the RPVI certification is required for completion of many vascular surgery fellowship programs.

Earning the RPVI Certification

The RPVI certification is earned by passing the Physicians' Vascular Interpretation (PVI) examination. The content of the PVI examination reflects current noninvasive vascular laboratory practice. To learn about how the PVI examination is written, go to APCA.org/PVI



ENGLEWOOD HEALTH

Qualifications to sit for the RPVI Exam

Applicants must maintain a patient log or other record of interpretation experience with a minimum of 500 vascular laboratory studies. This documentation must be maintained for at least three years following the date of application approval as case logs are subject to audit. Case logs must include at a minimum the date of the case, the testing area of the case, and whether the case was simulated/didactic or clinical. Additionally, the case log must include the name of the supervising physician/medical director and clinical site (i.e. hospital name, clinic or private practice) with contact information. For a sample patient case log, please visit APCA.org/SampleLetters.

RPVI Exam covers the following subjects:

- Carotid duplex ultrasound (extracranial cerebrovascular).
- Transcranial Doppler (intracranial cerebrovascular).
- Peripheral arterial physiologic testing (excludes Ankle Brachial Index (ABI) and single level exams).
- Peripheral arterial duplex ultrasound.
- Venous duplex ultrasound.
- Visceral vascular duplex ultrasound.

Fellow needs to complete the 500 case log requirement by Year 1. Fellow should register and sit for the RPVI exam during first quarter of Year 2 (July/August/Sept). RPVI Certification should be attained by second quarter of Year 2.

Didactic Experience

The fellow is responsible for choosing case presentations and topics for the weekly main Vascular Conference, and coordinating preparations and topics of educational material for discussion. Topics will be reviewed with the Program Director at the beginning of each year. The fellow is also responsible for presenting at the Vascular Mortality and Morbidity conference and attending the joint conference with general surgery residents. Fellows are expected to attend and present at the plenary session of the yearly Vascular Symposium of the Vascular Society of New Jersey.

Clinical Rotations

The goal of the clinical experience in vascular surgery is an intense, concentrated and focused experience in the diagnosis, surgical, non-surgical management, and follow-up care of the entire spectrum of vascular surgical diseases. The fellow is not expected to take in-house call, but is



ENGLEWOOD HEALTH

expected to be available on a first-call basis for vascular emergencies, 6 days of every week, excluding vacation weeks. The fellow is responsible to and under the supervision of the various attendings whose patients he/she is caring for, and ultimately to the Vascular Program Director.

Fellows will be monitored for their continued competence in medical knowledge, patient care, communication, professionalism, practice based learning and improvement, systems based practice and technical skills throughout training as outlined in goals and objectives for competencies.

During clinical rotations, the fellow is expected to participate in the pre, peri, and post –operative care of vascular patients of the full-time faculty. He/she is also responsible for assigning junior residents to surgeries, which he/she is not planning to do. All junior residents on the service are under the supervision of the fellow, and the fellow makes rounds, sees consults, and is responsible for tall management decisions on the service. The fellow participates at least weekly in the outpatient offices.

The fellows split weekend clinical coverage. He/she is expected to attend and participate in all didactic and clinical conferences of the division, including Department of Surgery Grand Rounds, and Vascular Case Conference.

Evaluations

Fellows will be monitored and evaluated for their continued competence in the six core competencies of medical knowledge, patient care, communication, professionalism, practice based learning and improvement, systems-based practice and technical skills throughout training.

Supervision

Refer to Supervision Policy in the House Staff Manual.

Research

The goal of the research component is to enhance the residents understanding of research methodology, to stimulate translational research, and to enhance the understanding of vascular biology and cellular mechanisms of disease.

This experience includes project selection, literature review, experimental design, data collection, analysis, presentation skills and manuscript preparation.



ENGLEWOOD HEALTH

Non-Invasive Vascular Laboratory Conference (list topics for a complete academic year)			
Who is in charge of the conference:		Dr. Adam Sagarwala	
Frequency of conference: Monthly		Thursday(s)	
Presenter			Title of presentation
Name	Faculty/ Fellow/ Resident	PGY	
Walsky	Faculty		Vascular Hemodynamics
Walsky	Faculty		Viscosity Shear, Stress + Strain
Walsky	Faculty		Basic Concepts, Hemodynamics, Physics
Lotrario / Sagarwala	Faculty Faculty		Upper Extremity; Hemodialysis (Live Demo)
Walsky	Faculty		Hepatic + Visceral Ultrasound Standards
Walsky	Faculty		Renal + Updated Ultrasound Standards
Lotrario/ Rao	Faculty Fellow	7	Renal + Mesenteric (Live Demo)/ Updated Ultrasound Standards
Elias	Faculty		Practical Venous Ultrasound
Walsky	Faculty		Non-Vascular Pathology EVAR
Elias	Faculty		Venous Insufficiency
Lotrario Cho	Faculty Fellow	7	Bypass Surveillance (Endo + Open)
Walsky / Cho	Faculty Fellow	7	Extremities; Pulse Volume Recording (PVR), Ankle-Brachial Index (ABIs), Toe-Brachial Index (TBIs) and Wrist-Brachial (WBI)
Rao/ Lotrario	Fellow Faculty	7	Live Demonstration of Abdominal Duplex Ultrasound: Celiac, SMA + Renal Visceral Vasculature



ENGLEWOOD HEALTH

Basic Science Lecture (list topics for a complete academic year)			
Who is in charge of the conference:		Dr. Thomas Bernik / Senior Fellow	
Frequency of conference: Monthly		Thursday(s)	
Presenter			Title of presentation
Name	Faculty/ Fellow/ Resident	PGY	
Dr. Jane Kim	Resident	PGY 1	Embryology of the Vascular System
Dr. Jessica Wassef	Resident	PGY 1	Basic Science of Vascular Hemodynamics
Dr. Severjia Saladziute	Resident	PGY 1	Basic Concepts of Hemostasis and Thrombosis
Dr. Jae Hee Cho	Fellow	PGY 6	Vascular Exposure + Anatomy
Dr. Fung	Resident	PGY 1	Diabetes and the Vascular Patients with PAD
Dr. Saladziute	Resident	PGY 1	Formation of Atherosclerosis/Formation of Plaque
Dr. Jane Kim	Resident	PGY 1	Hemodialysis Access
Dr. Ashina Choudhary	Resident	PGY 1	Amputations of Lower Extremities
Dr. Tarokh	Resident	PGY 1	Basic Science Behind DVT
Dr. Jae Hee Cho	Fellow	PGY 6	Criteria Upper Extremity Vein Mapping
Dr. Nakul Rao	Fellow	PGY 7	Pre-Op planning Thoraco-Abdominal Coral Reef Calcification
Dr. Kristin Sheppard	Resident	PGY 1	Common Bleeding Disorders/ Coagulopathies
Dr. Jessica Wassef	Resident	PGY 1	Pathophysiology of Renal Hypertension
Dr. Nakul Rao	Fellow	PGY 7	Nomenclature Consensus: SVU/SVM Guidelines



ENGLEWOOD HEALTH

Educational Journal Club /Guest Speaker Lectures/ New Technology Presentations		
Who is in charge of conference: Dr. Thomas Bernik / Senior Fellow		
Frequency of conference: Bi Monthly on Thursday(s)		
Presenter Name	Journal / Guest Speaker/ New Tech	Title of presentation
Dr. Pergolizzi	Guest Speaker	Molecular Biology: Clinical use of Embryonic Stem Cells
Dr. Kondapaneni	Guest Speaker	Thrombosis in the Pandemic
Dr. Nakul Rao PGY 7	New Technology Presentation	Clottriver and Flowtriver System Data
Dr. Nakul Rao PGY 7	Journal	Catheter-directed thrombolysis versus suction thrombectomy in the management of acute pulmonary embolism:
Dr. Jae Hee Cho PGY 6	Journal	A Randomized Trial of the Optimum Duration of Acoustic Pulse Thrombolysis Procedure in Acute Intermediate-Risk Pulmonary Embolism: The OPTALYSE PE Trial
Dr. Pergolizzi	Guest Speaker	Molecular Biology: Molecular Genetic of Atherosclerosis summary
Dr. Ofer Burshtain	Guest Speaker	(Pediatric Anesthesiologist) topic: Introduction to Anesthesia summary
Dr. Thomas Bernik	New Technology Presentation	ALTO graft presentation
Dr. Nakul Rao, PGY 7	Journal	<u>A systematic review and meta-analysis of long-term reintervention after endovascular abdominal aortic aneurysm repair</u>
Dr. Jae Hee Cho, PGY 6	Journal	<u>Type II endoleak with an enlarging aortic sac after endovascular aneurysm repair predisposes to the development of a type IA endoleak</u>
Dr. Pergolizzi	Guest Speaker	Molecular Biology: Stem Cells in Transplantation Medicine
Dr. Nakul Rao, PGY 7	Journal	The impact of contralateral carotid artery stenosis on outcomes after carotid endarterectomy
Dr. Jae Hee Cho, PGY 6	Journal	Severe contralateral carotid stenosis or occlusion does not have an impact on risk of ipsilateral stroke after carotid endarterectomy
Dr. Thomas Bernik	New Technology Presentation	Association of Adaptation of Transcarotid Artery Revascular With Center – Level Perioperative Outcomes
Dr. Pergolizzi	Guest Speaker	Molecular Biology: Trans-splicing as a Genetic Therapy



ENGLEWOOD HEALTH

Dr. Michael Cioroiu	Guest Speaker	HBO: The Evidence and Value of Early Application
Dr. Nakul Rao, PGY 7	Journal	A prospective, randomized, controlled clinical trial on the efficacy of a single-use negative pressure wound therapy system, compared to traditional negative pressure wound therapy in the treatment of chronic ulcers of the lower extremities
Dr. Jae Hee Cho, PGY 6	Journal	Vascular Assessment Enters the 21st Center
Dr. Nakul Rao, PGY 7	New Technology Presentation	S + N Negative Pressure A simple, comprehensive NPWT portfolio, suitable for incisional, acute and chronic wounds ¹⁻³

CLINICAL ROTATION

Endovascular training

Endovascular procedures are typically performed in the angiography suite or in a hybrid room located in the main operating room suites. In the first year, the vascular resident masters basic endovascular skills and begins to learn advanced skills.

At the conclusion of the first 12-month rotation, the fellow will be:

- knowledgeable in endovascular management including basic and advanced catheterization skills, principles of diagnostic and therapeutic procedures including angioplasty, atherectomy, stenting, thrombolytic therapy, embolization and aortic endografting including the thoracic and abdominal aorta using simple and branches grafts.

Non-invasive Vascular Laboratory

During this rotation, the fellow will read basic texts on vascular noninvasive imaging, review all studies performed at the listed site which are done on a daily basis. He/she will review his interpretation with the reading faculty for the week and will document interpretation.

At the conclusion of the first 6-month rotation, the fellow will:

- be able to deal with ultrasound-guided interventions.
- have acquired knowledge of ultrasound physics as it applies to current established techniques of vascular diagnosis.
- be familiar with all major forms of instrumentation associated with routine noninvasive vascular diagnosis, including plethysmography, continuous-wave and pulsed Doppler, and Color-flow duplex ultrasound scan technology.



ENGLEWOOD HEALTH

- be able to perform and interpret the results of noninvasive testing modalities performed for major non-cardiac vascular disorders.
- have a basic knowledge of ultrasound physics.

Diagnostic Angiography

Fellows will perform all diagnostic and therapeutic angiograms with the vascular faculty. Fellows will have already completed the radiation safety course. Fellows will select 2-3 cases to present at weekly vascular rounds.

At the conclusion of this rotation, the fellow will:

- be comfortable with diagnostic endovascular procedures, including aortograms and runoff as well as venograms and fistulograms.

Open Cases

During this first year rotation, the fellow will participate in open cases. He/she is expected to participate in the pre, peri and post-operative care of vascular patients of the faculty. The fellow also participates in the care of patients from voluntary faculty. He/she is also responsible for assigning junior residents to surgeries, which he/she is not planning to do. All junior residents on the service are under the supervision of the fellow, and the fellow makes rounds, sees consults, and is responsible for all management decisions on the service.

At the conclusion of the rotation, the fellow will be comfortable with:

- AV access
- basic LE bypass
- Carotid Endarterectomy (CEA)
- Transcarotid Artery Revascularization (TCAR)

Outpatient Clinic

The fellow participates at least weekly in the outpatient offices of the faculty. He/she should begin to learn the evaluation of patients with aneurysmal and/or peripheral arterial disease with regard to medical management testing preoperative preparation. The fellow should become familiar with evaluation of patients with venous disease and TOS.

Wound Care Integrated experience (see Wound Care Curriculum: Goals and Objectives)



ENGLEWOOD HEALTH

SECOND YEAR OF TRAINING –PGY–VII

YEAR 2	PRIMARY ACTIVITY	SECONDARY ACTIVITY
July	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Radiation Safety Course Vascular Laboratory Interpretation
August	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Radiation Safety Course Vascular Laboratory Interpretation
September	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular Laboratory Interpretation
October	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation
November	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation
December	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation
January	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation
February	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation
March	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation



ENGLEWOOD HEALTH

April	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation
May	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation
June	Vascular Service Open / Endovascular rotation Clinical Noninvasive Lab	Research Vascular laboratory Interpretation

GENERAL INFORMATION

Didactic Experiences

The resident is responsible for choosing case presentation and topics for the weekly main Vascular Conference, and coordinating preparations and topics of educational materials for discussion. Topics will be reviewed with the Program Director at the beginning of each year. The fellow is also responsible for presenting at the Vascular Mortality and Morbidity conference and attending the joint conference with the general surgery residents. Fellows are expected to attend and present at the plenary session of the Vascular Symposium of the Vascular Society of New Jersey.

Endovascular Procedures

During the year the vascular fellow performs diagnostic and therapeutic angiography.

- A substantial number of aortic endograft procedures and thoracic endograft will be performed. Aortic and peripheral stent graft procedures are performed routinely at our training site. Trainees have experience with all FDA approved endograft and stent graft devices available including fenestrated grafts.
- Upon completion of the training program, the vascular fellow will have both the skills and the experience to qualify for independent performance of all approved percutaneous interventions and aortic endografting based upon all current established credentialing guidelines.



ENGLEWOOD HEALTH

Inpatient Management

The vascular fellow serves as a supervisory resident in the clinical management of all inpatients on the teaching Vascular Surgery service.

Outpatient Experience

The vascular fellow participates in the weekly outpatient clinical activities at the offices of the fulltime faculty Clinic. The resident examines and evaluates patients and confers with the attending staff to plan further diagnostic evaluation and treatment.

Wound Care Integrated experience (see Wound Care Curriculum: Goals and Objectives)

Evaluations

Fellows will be monitored and evaluated for their continued competence in the six core competencies of medical knowledge, patient care, communication, professionalism, practice based learning and improvement, and system based practice and technical skills throughout training.

Supervision

Refer to Supervision Policy in House Staff Manual.

Research

The goal of the research component is to enhance the residents understanding of research methodology, and to stimulate translational research.

This experience includes project selection, literature review, experimental design, data collection, analysis, presentation skills and manuscript preparation.

At the conclusion of the second year the fellow will have:

- Completed and submitted research initiated during the first year which is suitable for publication and presentation.

Qualifications to sit for the RPVI Exam (see Year 1 training for full details)

Fellow needs to complete the 500 case log requirement by Year 1. Fellow should register and sit for the RPVI exam during first quarter of Year 2 (July/August/Sept). RPVI Certification should be attained by second quarter of Year 2.



ENGLEWOOD HEALTH

CLINICAL ROTATION

The fellow will participate in open major vascular procedures, thoracoabdominal aneurysms, and thoracic outlet procedures as well as procedures for venous disease, and traumatic vascular injuries. The fellow will participate in complex endovascular procedures including fenestrated aortic endografting and brachial endograft techniques

The fellow will continue to perform diagnostic and therapeutic angiography whether in the hybrid room or in the angiography suite.

The fellow will be expected to read all vascular lab studies every Monday and Friday, with the reading faculty.

The fellow will attend office hours with the faculty once a week.

During the last 6 months of the second year of training, the fellow will have increased independence with primary responsibility for the entire management of the Vascular Surgery Service. This includes performing both as a primary surgeon and teaching assistant on appropriate cases, seeing all consults to the vascular surgery service and supervising a weekly ½ day clinic. The fellow will be expected to make all primary management decisions independently, including decisions regarding type and timing of surgical procedures, with consultation from the attending staff. Ultimate authority for clinical decisions remains with the attending staff. The fellow again is involved with endovascular procedures under the guidance of full time faculty.

The fellow should be able to complete all procedures, both endo and open with minimal to no assistance required from faculty. It is expected that the fellow be able to take a junior resident through simple cases. The vascular fellow performs all categories of major vascular surgical procedures under the direct supervision of the attending staff. Surgical case totals are generally balanced with regard to case mix (e.g. carotid, aortic, extremities) and will meet defined category requirements.

It is expected that the end of the second clinical year, the fellow:

- Will have met all requirements for diagnostic angiography and is comfortable performing these procedures.
- Is comfortable with more complex endovascular procedures such as subintimal angioplasties and stenting.
- Will have an understanding of the evaluation and testing required for patients undergoing aortic, cerebrovascular, and peripheral vascular procedures.
- Will be competent with the treatment of venous disease insufficiency and varicose veins.



ENGLEWOOD HEALTH

- Will be competent with the evaluation and treatment of thoracic outlet diseases.
- Diagnose and recommend management for open aortic intervention.
- Define options for managing ruptured aortic aneurysms.
- Discuss complex vascular disorders such as carotid body tumors, thoracic aortic diseases.
- Understanding diagnosis and treatment of children with vascular diseases.
- Communicate effectively with patients and patient's families regarding care.
- Complete documentation on a timely basis for patient care
- Be comfortable with operative note dictation.
- Communicate with referring physicians and consultants regarding patient care.

Additional Conference Participation/ Opportunity

Annual UCLA Symposium (Moore Course)

This is a 4-day course which provides an in-depth, comprehensive, and current review of vascular and endovascular surgery, and it is co-sponsored by the Society for Vascular Surgery. It covers four significant categories of topics including open surgery, endovascular procedures, medical management and diagnostic and non-invasive imaging. It is particularly useful for those taking the vascular board examination and therefore the all fellows are to attend this course.

Veith Symposium

The Veith Symposium is a 5-day annual vascular event that represents the most cutting edge, comprehensive, and possibly the most well-attended meeting in the field of vascular surgery. It is setup in a series of 5-minute rapid-fire presentations that run the full successively the full duration of each day. It is geared towards all practitioners involved with vascular surgeries, procedures or interventions.. All vascular fellow are required to attend at least one day of the meeting, at during each year of their training.

Society for Vascular Surgery, Eastern Vascular Society, Society for Clinical Vascular Surgery, etc.

There are numerous opportunities for the vascular residents to attend one of the many other vascular meetings. These additional opportunities will be granted on an individual basis with priority given based on seniority and to those individuals who have abstracts/papers that are accepted to the meeting.



ENGLEWOOD HEALTH

CURRICULUM/GOALS AND OBJECTIVES IN WOUND CARE Experience

Goals:

To familiarize the vascular fellows with the concept of advanced treatment of chronic wounds and when to refer to the advanced healing center.

Become familiar with the principal etiologies of chronic wounds as well as patient and wound assessment.

Become familiar with Physiological wound healing, as well as the pathophysiology of chronic wound healing and factors influencing the outcome of proper treatment.

Become familiar and know proper indications/utilization of advanced wound treatments (skin substitutes, NPWD and Cellutome)

OBJECTIVES:

1. Understand the anatomy and physiology of skin and pathophysiological implications
2. Understand the phases of wound healing
3. Understand initial patient assessment and wound assessment.
4. Become familiar with diagnosis and treatment of arterial wounds, venous wounds, diabetic foot neuropathic wounds, and pressure injuries wounds, and lymphedema.
5. Importance of clinical pathways and evidence based medicine in wound healing
6. Clinical approach and option of treatment in atypical wounds (sickle cell diss., spider bites, pyoderma gangrenosum, calcinosis cutis i.e.)
7. Become familiar with different types of debridement and hemostasis
8. Infected wounds versus contaminated wounds and the treatment approach
9. Become familiar with Wound dressings, specific for different types of wounds and application of topicals.
10. New technologies in advanced wound treatment (skin substitutes, genetic engineered skin substitutes, stem cell treatment and HBO)
11. Associated factors for successful outcomes in wound treatment (nutrition, pain management, edema control).